REMARKS

I. Office Action Summary

Claims 12-42 are pending. Claims 12, 28 and 42 are the independent claims. In the non-final Office Action mailed April 19, 2005 the Examiner provided new grounds of rejection. The Examiner rejected the claims as obvious under 35 U.S.C. §103(a) as set forth below:

Claims	**Combination of References**
12-19 and 21-27	Liu et al. (US 6,349,096) + Whittaker et al. (US 6,130,893) + Weinman, Jr. (US 6,453,022)
28-41	Liu et al. + Whittaker et al. + Klok et al. (US 5,930,250)
20	Liu et al. + Whittaker et al. + Weinman, Jr. + Klok et al.
42	Liu et al. + Whittaker et al.

II. Rejections Under 35 U.S.C. § 103(a)

A. Claims 12-19 and 21-27

The Examiner rejected claims 12-19 and 21-27 as obvious over the combination of Liu et al., Whittaker et al. and Weinman, Jr. Applicant respectfully traverses.

CLAIM 12

Claim 12 relates to a wide area communications network that is configured to transport voice information between first and second subscriber locations over a packet data connection. Thus the feature recited in claim 12 of:

> the first and second subscriber locations in communication via at least one derived digital telephone voice channel carried over the first and second digital subscriber lines and by a public switched telephone network connecting the first digital subscriber line access multiplexer to the second digital subscriber line access multiplexer . . .

requires that voice information be communicated over a derived digital voice channel where voice is transmitted over a packetized data path rather than just as an analog or digital PSTN channel over a standard circuit switched PSTN connection. The derived digital voice channel is just that, a channel for a voice call carved out of, or "derived" from the packet data line (See, for example, p. 9, lines 9-16 of specification). Further explanation of the concept of voice channel information existing in a derived digital channel rather than a circuit switched channel may be seen in the embodiments discussed on p. 8, line 31 – p. 10, line 30.

Also, claim 12 recites the feature of:

> wherein a subscriber unit at the first subscriber location is configured to select one of a plurality of derived digital voice channels for a voice communication to the second subscriber location.

The subscriber unit at the first subscriber location is structured so that it can select one of a number of derived digital voice channels created in the packet data line. As described in embodiments discussed in the specification at p. 12, line 21 – p. 13, line 13 and p. 17, lines 1-21, the subscriber unit may recognize, for example, an address consistent with the implemented data protocol.

In Applicant's prior Amendment filed January 20, 2005, Applicant pointed out how Liu et al. lacks at least the features in claim 12 identified above. Liu et al. discloses a system for end-to-end data and analog voice connections. The disclosed system in Liu et al. focuses on optimal data routing of high bit rate data based on certain parameters, such as bandwidth requirements and cost, and is provisioned to allow the user to request specific data paths (Col. 3, lines 43-50; Col. 4, lines 21-28).

Liu et al. lacks any teaching or suggestion of a derived digital voice channel or subscriber units that can select a voice channel from among derived digital voice channels. In the current Office Action, the Examiner has suggested that Whittaker et al. discloses derived digital voice channels and that Weinman discloses a multi-line phone that can be combined with Liu to make up for the deficiencies in Liu.

Applicant submits that the claimed feature of a subscriber unit configured to select one of a plurality of derived digital voice channels for a voice communication to the second subscriber location is entirely missing from the combination proposed by the Examiner. Weinman teaches a general multi-line phone with mixing and audio control.

Weinman fails to teach or suggest a derived digital telephone voice channel or accessing a derived digital telephone voice channel. Instead, Weinman discloses a multi-line phone coupled to separate telephone lines (See Weinman, Col. 3 lines 17-45). Whittaker et al. fails to make up for this deficiency. Whittaker et al. generally discloses adding a terminal adapter 20 to a customer premise, where the terminal adapter has a specific address that will allow an analog phone to make or receive calls on a POTS line or the specific digital line (See Whittaker, FIG. 3; Col. 3, lines 37 – 57; Col. 6, lines 9-21). Whittaker lacks any teaching or suggestion of a subscriber unit configured to select from among different derived digital telephone voice channels.

In addition to lacking the claimed subscriber unit, there is no motivation to combine these three references. As set out in MPEP 2143.01, the fact that a concept is technologically simple, that references could be combined, or that the claimed invention is within the capabilities of one of ordinary skill does not satisfy the requirement of motivation to combine. As discussed previously, Liu et al. discloses treating voice calls and data calls separately, where routing of data calls can be actively managed based on bandwidth requirements and cost. Whittaker et al. discloses a home-based LAN where a packetized voice channel can be multiplexed onto a two wire telephone line. Applicant submits that the disclosure of Liu et al., with its clear emphasis on phone companies providing "high bit rate transmission" for an "end-to-end, and high-speed interconnection" (See Liu, Col. 1. lines 30-45; Col. 3, lines 43-50; Col. 6, line 40 –59; Col. 10, lines 35-37) does not provide any motivation to combine with Whittaker et al. and its disclosure of a home LAN with low data rate voice channel multiplexed onto a two-wire telephone line. It is unlikely that one of ordinary skill would be motivated to apply the teachings of Liu et al. (additional data routing selections for high data rate connections) to teachings in Whittaker et al. (addition of inexpensive additional voice line) when Liu separates voice from data and is focused on the problems of high bit rate data routes. A lower bit rate digital voice call would then seem to involve selecting among additional routing alternatives every time a person makes a call – requiring changes to both the hardware of Whittaker and of Liu (neither of which discloses the claimed subscriber unit or suggests its desirability).

Similarly, no motivation to combine Weinman and either of Liu et al. or Whittaker et al references is found in the references. Weinman's disclosure of a multi-line phone with added mixing and audio control capabilities, and without any teaching of possible use or ability for alteration to handle derived digital voice channel management, fails to provide any motivation for combination with Whittaker or Liu. Although a multi-line phone could conceivably be used in either of Whittaker or Liu, Whittaker expressly discloses ATU-Rs that connect a single phone to both an analog line and a digital line and Liu is unconcerned with multi-line telephone calls. Thus, there is no motivation to combine Weinman with these references, let alone any motivation or description of how or why one would alter the separate phone line connectivity disclosed in Weinman to a digital voice channel selection device. Accordingly, Applicant submits that the mere fact that all three references have something to do with unrelated aspects of telecommunications systems is an insufficient basis for motivation to combine.

Because there is no motivation to combine the disparate teachings of the three cited references, and because at least one feature of claim 12 would be missing if such a combination were made, Applicants submit that claim 12 is allowable over the art of record. Claims 13-27 are dependent claims, therefore their allowability directly follows from the allowability of independent claim 12. Reconsideration is respectfully solicited.

B. Claim 20

Claim 20 was rejected as obvious over the combination of Liu et al., Whittaker et al., Weinman, and Klok et al.

Applicant submits that dependent claim 20, which depends from claim 12, is allowable for at least the same reasons as provided for independent claim 12. Klok et al. fails to make up for the deficiencies of Liu et al., Whittaker et al. or Weinman as it does not teach or suggest the digital telephone voice channel, the wide area network components or the subscriber unit configured to select individual derived digital voice channels as claimed. Also, there is no suggestion in Klok et al. to combine its generic teaching of a data line interface (IWU) to a PSTN with these other references.

C. Claims 28-41

Claim 28

Claim 28 relates to a wide area communications network including, *inter alia:*

> a first hybrid circuit communicating a voice telephone call from a first telephone in communication with the first local area network to a second telephone in the second telephone system, wherein the first hybrid circuit has a first portion comprising a virtual circuit and a second portion comprising a switched circuit

The Examiner has rejected claim 28 over the combination of Liu et al., Whittaker et al. and Klok et al. Applicant respectfully traverses on the basis that these references do not disclose the claimed first hybrid circuit for voice telephone calls in combination with the other features of claim 28, and are not properly combinable. Liu et al. and Whittaker et al. relate to completely different systems and disclose completely different goals and motivations.

The discussion in Liu et al. focuses on standard circuit switched telephony and user selectable routing for data. As discussed above with respect to claim 12, the teachings in Liu relate to optimization of *high bandwidth/bit rate data* routing control to help manage bandwidth and cost. The specification in Liu et al. repeatedly and consistently identifies voice signal information and the circuit switched path that voice signal information takes separately from the data channel information and the packet switched path or other route that data channel information can take (See Col. 4. lines 8-11; Col. 4, lines 45-49; Col. 8, lines 39-50; Col. 10, lines 48-54; Col 11, lines 42-45; Col 12, lines 1-7). Also, as noted by the Examiner, Liu et al. lacks any teaching of a hybrid telephone voice channel as claimed.

The Examiner has suggested that Whittaker teaches the missing hybrid telephone voice channel (Office Action, p.8). The Examiner's basis for a motivation to combine is the that the power failure back-up of a POTS line and the convenience of adding additional phone lines without more wires would cause someone to combine Whittaker and Liu. However, Applicant submits that Liu is unconcerned with telephone voice communications and already has power failure issues covered by virtue of the POTS-only voice communications disclosed. As Liu et al. is concerned with high bit rate data transfer management, one of ordinary skill would not be motivated to combine the low bit rate voice telephony of Whittaker with the high bit rate data transfer mechanisms in Liu et al.

Finally, although Klok et al. discloses a generic IWU for permitting packetized data over a PSTN, it fails to make up for the deficiencies of Liu et al. and Whittaker et al. regarding digital telephone voice channels or a hybrid circuit carrying a voice channel as claimed.

For at least these reasons, Applicant submits that Claim 28 is allowable over the art of record. Claims 29-41 are dependent claims, therefore their allowability directly follows from the allowability of independent claim 28. Reconsideration is respectfully requested.

D. Claim 42

CLAIM 42

Claim 42 relates to a wide area communications network that includes, *inter alia,* first and second subscriber locations in communication over digital subscriber lines.

> the first and second subscriber locations in communication via at least one derived digital telephone voice channel carried over an Internet connection and by the first and second digital subscriber lines.

The Examiner rejected claim 42 as obvious over the combination of Liu et al. and Whittaker et al. Applicant agrees with the Examiner that Liu et al. is also lacking at least a teaching of an Internet connection carrying voice information. Applicant disagrees, however, that Whittaker et al. makes up for the deficiencies in Liu et al. Specifically, Applicant submits that the Liu et al. reference, with its express segregation of voice connectivity from high bit rate data communications, and the Whittaker et al. reference, with its focus on low cost digital voice lines that are inherently lower bit rate connections, are not properly combinable.

The Examiner's suggestion that the combination is obvious based on low transmission cost and efficient control of end-to-end transmission paths (Office Action, pp. 10-11) is inapplicable here. Neither Liu et al. nor Whitaker et al. are concerned with the costs of lower bandwidth digital voice calls. The only teaching regarding the advantages of selecting among routing alternatives is in Liu et al. for high bit rate data communications where costs and routing are an issue. Applicant submits that the route selection in Liu et al. teaches away from a combination with Whittaker et al. because, aside from the clear separation of voice communication from data communication in Liu, one of ordinary skill would not want to add complexity and delay to a typical lower bandwidth digital telephone call by inserting additional routing decisions. To the contrary, it is much more likely that one of ordinary skill would not burden a telephone caller with extra call placement decisions based on Whittaker et al.'s teaching to merely add an extra line by connecting an analog telephone to a converter that can transparently access either a POTS line or a predetermined digital voice channel.

For at least these reasons, Applicant submits that claim 42 is allowable over the cited art.

III. Conclusion

In view of the above amendments and remarks, Applicant submits that claims 12-42 are now in condition for allowance. If any questions arise or issues remain, the Examiner is invited to contact the undersigned at the number provided below in order to expedite review of this case.

Respectfully submitted,

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